



National Highway Traffic Safety Administration

49 CFR Parts 571 and 575

[Docket No. NHTSA-2020-0067]

RIN 2127-AL92

Federal Motor Vehicle Safety Standards, Consumer Information; Standard Reference Test Tire

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: This final rule amends several Federal motor vehicle safety standards and consumer information regulations to update the standard reference test tire (SRTT) used therein. The SRTT is used in those standards and regulations as a baseline tire to rate tire treadwear, define snow tires based on traction performance, and evaluate pavement surface friction. This rule is necessary because the only manufacturer of the currently referenced SRTT ceased production of the tire. Referencing a new SRTT ensures the availability of a test tire for testing purposes.

DATES: The effective date of this final rule is [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. The incorporation by reference of the publications listed in the rule has been approved by the Director of the Federal Register as of [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Petitions for reconsideration: Petitions for reconsideration of this final rule must be received not later than [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Petitions for reconsideration of this final rule must refer to the docket and notice number set forth above and be submitted to the Administrator, National Highway Traffic Safety

Administration, 1200 New Jersey Avenue S.E., Washington, D.C. 20590. For hand delivery or courier delivery, delivery is only possible between 9:00 AM and 5:00 PM Eastern time. To be sure someone is there to help you, please call (202) 366-9332 before coming.

If you wish to submit any information under a claim of confidentiality, you should submit the following to the NHTSA Office of Chief Counsel, 1200 New Jersey Avenue S.E., Washington, D.C. 20590: (1) a complete copy of the submission; (2) a redacted copy of the submission with the confidential information removed; and (3) either a second complete copy or those portions of the submission containing the material for which confidential treatment is claimed and any additional information that you deem important to the Chief Counsel's consideration of your confidentiality claim. A request for confidential treatment that complies with 49 CFR part 512 must accompany the complete submission provided to the Chief Counsel. For further information, submitters who plan to request confidential treatment for any portion of their submissions are advised to review 49 CFR part 512, particularly those sections relating to document submission requirements. Failure to adhere to the requirements of part 512 may result in the release of confidential information to the public docket. In addition, you should submit two copies from which you have deleted the claimed confidential business information, to the Administrator. To facilitate social distancing during COVID-19, NHTSA is temporarily accepting confidential business information electronically. Please see <https://www.nhtsa.gov/coronavirus/submission-confidential-business-information> for details.

FOR FURTHER INFORMATION CONTACT: You may contact Hisham Mohamed, Office of Crash Avoidance Standards, by telephone at (202) 366-0307 or David Jasinski, Office of the Chief Counsel, by telephone at (202) 366-2992. The mailing address of both of these officials is: National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE, Washington, DC 20590.

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I. Executive Summary

The purpose of this final rule is to replace references to the 14-inch Standard Reference Test Tire (SRTT) with references to a new 16-inch SRTT. As the name suggests, the SRTT is a test tire that is not manufactured for general use. The 14-inch SRTT is used by NHTSA in three ways. First, as part of the Federal Motor Vehicle Safety Standards (FMVSS) (49 CFR part 571), it is used to verify the surface friction of test surfaces for braking and electronic stability control standards. Second, it is used as a traction reference for the determination of whether a tire may be considered a "snow tire" under FMVSS No. 139 (49 CFR § 571.139). Third, the SRTT is used in NHTSA's Uniform Tire Quality Grading Standards (UTQGS) consumer information program as the course reference tire as part of NHTSA's base course wear rating (BCWR) determination for the treadwear course.

Because Michelin, the only manufacturer of the 14-inch SRTT, has ceased production of the tire in 2020, NHTSA must find a suitable replacement tire. After substantial testing by NHTSA and several test partners, NHTSA has determined that the 16-inch SRTT is a suitable replacement. The testing program has determined equivalent values for test surface friction, the snow tire determination, and the BCWR determination that do not change the severity of any requirements and ensure that tire consumer ratings tested using either SRTT are comparable.

II. Background

A. SRTT Information

This rulemaking addresses the standard reference test tire (SRTT) manufactured according to specifications set forth in an ASTM International (ASTM) standard, E1136, “Standard Specification for P195/75R14 Radial Standard Reference Test Tire” (14-inch SRTT). The 14-inch SRTT is a size P195/75R14 all-season steel-belted radial tire. The dimensions, weight, materials, and other physical properties of the tire are specified in E1136. The tire is not intended for general use, but as the name indicates, is used for testing.

NHTSA uses the 14-inch SRTT to evaluate test surface friction¹ for safety standards relating to braking because the narrow specifications for the tire (size, component materials, etc.) ensure consistent, repeatable performance. The 14-inch SRTT is also incorporated in the definition of a “snow tire” in FMVSS No. 139,² which is defined as a tire that attains a traction index greater than or equal to 110 compared to the 14-inch SRTT when using the ASTM F1805 snow traction test. The SRTT is also used as part of the Uniform Tire Quality Grading Standards (UTQGS),³ an information program to assist consumers in making informed decisions when purchasing tires. The UTQGS apply to passenger car tires and require motor vehicle and tire manufacturers and tire brand name owners to provide consumers with information about their

¹ 49 CFR 571.105, 571.121, 571.122, 571.126, 571.135, 571.136, 571.139, 571.500.

² See 49 CFR 571.139.

³ See 49 CFR 575.104.

tires' relative performance regarding treadwear, traction, and temperature resistance. The SRTT is used as the course monitoring tire (CMT) for the treadwear course.⁴ Because tire performance over the test course can change daily due to variability in road surface, temperature, humidity, and precipitation, the CMTs are run alongside candidate tires being tested. The performance of the CMT is used to determine the base course wear rate (BCWR), which is published four times per year by NHTSA and is used to determine a course severity adjustment factor that is applied during tire treadwear testing.

In an August 5, 2021 notice of proposed rulemaking (NPRM),⁵ NHTSA proposed amendments to the FMVSSs and tire regulations to replace references to the 14-inch SRTT with references to a newer 16-inch SRTT. The 14-inch SRTT was first introduced in the 1980s. The 14-inch SRTT was manufactured by one company, Michelin North America, Inc (Michelin) and was sold under its Uniroyal brand. Michelin has ceased production of the 14-inch SRTT because it has become difficult for Michelin to obtain the materials necessary to manufacture the SRTT.⁶ ASTM has developed an updated specification for an SRTT designated F2493 (16-inch SRTT). The 16-inch SRTT is a size P225/60R16 97S radial standard reference test tire. The 16-inch SRTT is considered to be more representative of current tires because of its larger size and new material and design features that lead to traction that is more typical of modern passenger car tires.⁷ To the best of NHTSA's knowledge, the 16-inch SRTT is manufactured only by Michelin and sold under its Uniroyal brand. NHTSA determined that the 16-inch SRTT was the only suitable replacement that had been suggested.

However, because the 16-inch SRTT is a larger size and uses more modern design and materials, it is likely that the 16-inch SRTT will not perform identically to the 14-inch SRTT.

⁴ The treadwear course is a 400-mile course of public roads near San Angelo, Texas.

⁵ 86 FR 42762.

⁶ See "Discontinued Tire Will Lead to ASTM Standard Changes" (July 30, 2015), *available at* <https://www.astm.org/cms/drupal-7.51/newsroom/discontinued-tire-will-lead-astm-standard-changes> (last accessed April 13, 2021).

⁷ See "New ASTM Specification Presents Requirements for Standard Reference Test Tire" (April 1, 2007), *available at* <https://www.astm.org/cms/drupal-7.51/newsroom/new-astm-specification-presents-requirements-standard-reference-test-tire> (last accessed April 13, 2021).

Therefore, NHTSA, in cooperation with Transport Canada, Natural Resources Canada, representatives of ASTM committees F09 on tires and E17 on vehicle-pavement systems, the U.S. Tire Manufacturers Association (including Michelin, currently the sole manufacturer of SRTTs), and the Rubber Association of Canada, conducted testing to determine the consequences of replacing the 14-inch SRTT with the 16-inch SRTT. The results of the testing by these entities, in addition to NHTSA's own testing, substantially contributed to the August 2021 proposal to replace the 14-inch SRTT with the 16-inch SRTT.⁸

B. Surface Friction Determination

NHTSA first incorporated the 14-inch SRTT into the Federal Motor Vehicle Safety Standards (FMVSSs) in a 1995 rule adopting FMVSS No. 135, the light vehicle braking standard. The SRTT is used to determine the friction of the test surface using the 1990 version of the ASTM E1337 test method. The ASTM E1337 test method involves mounting the SRTT to a test trailer, bringing the trailer to a test speed of 40 mph (64 km/h), and applying the brake to produce the maximum braking force prior to wheel lockup.

When NHTSA was informed that production of the 14-inch SRTT was to be discontinued, NHTSA evaluated the 16-inch SRTT to determine whether it would be a suitable replacement. NHTSA carefully considered the effect of the 16-inch SRTT on the determination of peak friction coefficient (PFC).⁹ NHTSA was concerned, and subsequent testing verified, that the use of the 16-inch SRTT without further changes to the FMVSSs would increase the stringency of the braking and ESC FMVSSs. The reason for this was that the different materials used in the 16-inch SRTT and the increased size of the tire would result in the 16-inch SRTT having better traction performance than the 14-inch SRTT. If the 16-inch SRTT has improved traction performance relative to the 14-inch SRTT, then the same surface would have a higher PFC when tested with the 16-inch SRTT. Alternatively stated, obtaining an identical PFC value

⁸ See Docket No. NHTSA-2020-0067-0002.

⁹ PFC is also sometimes referred to as peak braking coefficient or PBC.

using the 16-inch SRTT would require a road surface with lower friction. Testing braking systems using stopping distance on road surfaces with lower friction would require improved braking performance to stop in the same distance, which is not an outcome intended by this rulemaking. Consequently, NHTSA sought a conversion factor to evaluate PFC of a test surface using the 16-inch SRTT without altering the severity of any braking or ESC FMVSSs.

ASTM developed a formula to correlate PFC determinations using the 14-inch and 16-inch SRTTs. NHTSA also commissioned confirmatory testing with its contactor, Transportation Test Center Inc. (TRC), which further verified the conversion formula used in the 2019 version of ASTM E1337.¹⁰ This formula was included in a 2019 update to ASTM E1337. In the NPRM, NHTSA proposed to replace the 1990 version of ASTM E1337 currently incorporated by reference with the 2019 version. Furthermore, NHTSA used the formula in the 2019 version of E1337 to derive new PFC values for all FMVSSs when evaluated using the 16-inch SRTT. Those values are listed in Table 1 below.¹¹

Table 1 - PFC Conversion Values; from 14-inch to 16-inch SRTT

FMVSS Section	PFC value using 14-inch SRTT	New PFC value using 16-inch SRTT
FMVSS No. 105 S6.9.2(a) (high friction testing)	0.9	1.02
FMVSS No. 105 S6.9.2(b) (low friction testing)	0.5	0.55
FMVSS No. 121 S5.3.1.1, S5.7.1, S6.1.7 (high friction testing) ¹²	0.9	1.02
FMVSS No. 121 S5.3.6.1, S6.1.7 (low friction testing)	0.5	0.55
FMVSS No. 122 S6.1.1.1 (high friction testing)	0.9	1.02
FMVSS No. 122 S6.1.1.2 (low friction testing)	≤0.45	≤0.50
FMVSS No. 122 S6.9.7.1	≥0.8	≥0.90
FMVSS No. 126 S6.2.2	0.9	1.02
FMVSS No. 135 S6.2.1, S7.4.3, S7.5.2, S7.6.2, S7.7.3, S7.8.2, S7.9.2, S7.10.3, S7.11.3	0.9	1.02

¹⁰ See Docket No. NHTSA-2020-0067-0002.

¹¹ Each value derived using the formula was rounded to the hundredths position, rounding up if necessary. This ensures that the updated FMVSS test surface PFC specification will be no more stringent than it is now, consistent with NHTSA's intent in this rulemaking.

¹² NHTSA is also revising Tables I, II, and IIA in FMVSS No. 121 to eliminate the redundant references to PFC values in those tables. In place of PFC values, NHTSA is including in Table I (Stopping Sequence) references to the sections in which the various procedures are set forth, which is a more helpful reference.

FMVSS No. 136	0.9	1.02
FMVSS No. 500 ¹³	0.9	1.02

C. Snow Tire Definition

Presently, for a manufacturer to designate a tire as a "snow tire," the tire must attain a traction index equal to or greater than 110 compared to the 14-inch SRTT when tested using the snow traction test in the 2000 version of ASTM F1805. The ASTM F09 committee on tires commissioned a study to determine the feasibility of replacing the 14-inch SRTT with the 16-inch SRTT in the determination of whether a tire meets the definition of "snow tire." This study was funded by the United States Tire Manufacturers Association (USTMA). ASTM has published a technical report documenting this work.¹⁴ ASTM determined that a correlation factor of 0.9876 was appropriate, meaning that a tire that attained a rating of 110 when tested using the 14-inch SRTT correlated to a rating of 111.4 or 111.5 when tested using the 16-inch SRTT, depending on the number of significant digits considered. Recent guidance issued by the USTMA, a trade association consisting of companies that manufacture tires in the United States, recommends a minimum traction index of 112 using the 16-inch SRTT.¹⁵ Accordingly, NHTSA proposed to amend the definition of "snow tire" in FMVSS No. 139 to specify that a snow tire is a tire that attains a traction index of 112 when tested using the updated F1895 test method using the 16-inch SRTT, consistent with USTMA's guidance.

Furthermore, after reviewing this information from the USTMA, NHTSA determined that additional clarification was necessary to the definition of a "snow tire" in FMVSS No. 139. The 2020 version of ASTM F1805 defines the standard test procedure for measuring traction on "snow" and "ice" surfaces. However, there are multiple surface types in both the "snow" and "ice" categories. They include soft pack (new) snow, medium pack snow, medium hard pack

¹³ Although FMVSS No. 500 specifies a PFC value for the test surface, the test surface is only used to verify the vehicle's maximum speed.

¹⁴ Available at

https://www.astm.org/COMMIT/2019_04_10_E1136%20to%20F2493%20transition%20for%20ASTMF1805.pdf (last accessed April 13, 2021).

¹⁵ See https://www.ustires.org/sites/default/files/USTMA_TISB_37_0.pdf (last accessed April 13, 2021).

snow, hard pack snow, ice – wet, and ice – dry.¹⁶ The definition of "snow tire" in FMVSS No. 139 does not specify the surface type specified within ASTM F1805 for testing.

NHTSA stated that the "medium pack snow" condition was intended for use by manufacturers for marketing tires as "snow tires." Accordingly, NHTSA proposed to specify that the traction index is obtained using the "medium pack snow " surface and further proposed updating the incorporation by reference of ASTM F1805 to the 2020 version.

D. Proposed UTQGS Amendments

In anticipation of Michelin's decision to cease production of the 14-inch SRTT, NHTSA began including testing of the 16-inch SRTT as part of its BCWR determination. Since the second quarter of 2016, NHTSA has been duplicating BCWR testing using both the 14-inch SRTT and the 16-inch SRTT. NHTSA considered several options for updating the UTQGS regulations to account for the 16-inch SRTT. As of publication of the NPRM, NHTSA had acquired 17 consecutive quarters of side-by-side testing of the 14-inch and 16-inch SRTTs on the treadwear course and published BCWR data for that period.¹⁷ NHTSA requested comments on how the new conversion factor should be selected from among the available quarters of data. For the NPRM, NHTSA used the average of all 17 quarters of data to adjust the formula for severity adjustment factor using the BCWR.

NHTSA also proposed a modification to language in the treadwear test procedure in §575.104 to reference the total distance and schedule of events in terms of circuits completed rather than mileage. This proposed change was intended to allow testing to be more flexible in the event of route changes or other unforeseen circumstances.

Finally, NHTSA proposed changes lengthening the amount of time a CMT may be used after removal from storage. Currently, a CMT must be no more than one year old at the commencement of testing and that it must be used within two months after removal from storage.

¹⁶ The surface types are defined in the text of ASTM F1805.

¹⁷ See Docket No. NHTSA-2020-0067-0011

Because NHTSA lacks facilities to store tires in a climate-controlled environment at its testing facility in San Angelo, Texas, NHTSA only purchases CMTs on a quarterly basis depending on funding availability and conducts BCWR testing as soon as feasible after receiving a shipment of CMTs. Lack of funding sometimes requires NHTSA to delay CMT purchases, and sometimes when NHTSA purchases CMTs, supplies may be limited. NHTSA proposed lengthening the amount of time a tire may be removed from storage to four months. Further, NHTSA also requested comment on whether the word "storage" was sufficiently well defined and, if not, how NHTSA could define "storage" more clearly to ensure tires are stored in such a way that would minimize testing variability without providing inflexible limitations on NHTSA's use of the SRTT.

E. Proposed Effective Dates

For the changes to the UTQGS, NHTSA stated that it expected to make any changes effective at the next BCWR determination at least 30 days after the date of publication of a final rule. NHTSA did not believe any further lead time is necessary for the following reasons. First, because NHTSA is using a conversion factor to keep the rating scale used with the 14-inch SRTT and 16-inch SRTT similar, ratings of a particular line of tires should not be affected by the proposed rule. Second, tire lines rated prior to the effective date of the changes would not be required to be rerated. Third, limited availability of the 14-inch SRTT could make it difficult for NHTSA to continue to obtain 14-inch SRTTs in its BCWR determinations.

For FMVSS changes, NHTSA proposed a lead time of six months. NHTSA determined that six months was sufficient to give compliance test facilities sufficient time to obtain and validate test surfaces using the 16-inch SRTT. Although NHTSA has determined an equivalent level of surface friction when evaluating PFC with the 16-inch SRTT in place of the 14-inch SRTT, NHTSA anticipates requiring test facilities conducting NHTSA's compliance tests to revalidate test surfaces using the 16-inch SRTT, to ensure that testing is being done in accordance with the procedures in the FMVSS. However, NHTSA observed that potential

unavailability of the 14-inch SRTT may constitute good cause for NHTSA to impose a shorter lead time in a final rule resulting from the proposal.

III. Summary of Comments and NHTSA's Response

NHTSA received five comments on the August 2021 NPRM from, the Japan Automobile Tyre Manufacturers Association (JATMA), Michelin North America, Inc. (Michelin), the U.S. Tire Manufacturers Association (USTMA),¹⁸ Phillip Donovan, and the Alliance for Automotive Innovation (Alliance).¹⁹ Both JATMA and Michelin supported the comments filed by USTMA. JATMA had no further comment other than to encourage NHTSA to expedite publication of a final rule because no 14-inch SRTTs were available for tire manufacturers to purchase. USTMA and Michelin also encouraged NHTSA to expedite publication of the final rule.

A. Revision Date of ASTM F2493

USTMA and Michelin recommended that all references to ASTM F2493 (the specifications for the 16-inch SRTT) refer to the standard without a revision date. As an example, USTMA cites a recent amendment to the Canadian Motor Vehicle Tire Safety Regulations, in which the snow tire definition references an SRTT that "meets the requirements of any version of ASTM F2493."²⁰ Similarly, UNECE Regulation No. 117 and Global Technical Regulation No. 20 reference ASTM F2493 without regard to version.

The incorporation by reference of ASTM F2493 without regard to date in Canadian and UNECE regulations makes it easier for governments to update their rules in the event future changes to ASTM F2493 are warranted. In light of the comments and the benefit to NHTSA of not having to conduct rulemaking to keep references to the ASTM F2493 up-to-date, NHTSA

¹⁸ USTMA is a trade association representing tire manufacturers that produce tires in the United States. Michelin is part of USTMA, but also submitted comments separately.

¹⁹ The Alliance is a trade association including manufacturers of nearly all passenger cars and light trucks sold in the United States.

²⁰ Regulations Amending Certain Regulations Made Under the Motor Vehicle Safety Act, SOR/2021-83 (Can.).

has considered whether the incorporation by reference of the specifications for the SRTT is necessary.

As required by 5 U.S.C. 552(a)(1), NHTSA must publish the text of its rules and any amendment, revision, or repeal thereto in the *Federal Register*. The only exception to this requirement is that matter reasonably available that cannot be published in the *Federal Register* may be deemed published when incorporated by reference therein with the approval of the Director of the Federal Register. In 1 CFR 51.1(f), the regulations setting forth the policy followed by the Director of the Federal Register in approving incorporations by reference, an incorporation by reference of a publication is limited to the edition of the publication that is approved. Further, that regulation provides that future amendments or revisions to a publication are not included in an incorporation by reference. Therefore, while NHTSA may incorporate the most current and prior versions of ASTM F2493 into the CFR, the Director of the Federal Register will not approve incorporation by reference of ASTM F2493 without reference to version or in any other way that would include future versions.

NHTSA, with assistance from the Office of the Federal Register, has considered these provisions and the manner in which ASTM F2493 is referenced in the proposed rule and in this final rule. Because no requirements, procedures, or anything else within the text of ASTM F2493 are referenced in this final rule, incorporation by reference is unnecessary. In order to obtain a tire manufactured to the specifications of ASTM F2493, an entity would not need reference to the specific requirements of the standard. The entity would only need to contact the manufacturer of the tire.

Having determined that incorporation by reference is not necessary, NHTSA agrees with the commenters that it would be preferable to refer to ASTM F2493 without regard to version number. Because the SRTT is a reference tire that is designed to have a specific level of performance, NHTSA would not expect that any subsequent revision of ASTM F2493 to have a consequential effect on the performance of the SRTT. Further, regardless of any particular

version of ASTM F2493 that might be referenced in NHTSA's regulations, it is likely that any tire available for purchase and used by NHTSA will be manufactured according to the most recent or immediate prior version of ASTM F2493, given that the tire is manufactured in small batches.

Accordingly, NHTSA is not incorporating ASTM F2493-19 by reference as proposed in the NRPM, and is instead referring to ASTM F2493 without reference to version number.

B. Maximum Age and Storage Requirements for NHTSA's SRTT Use

In the August 2021 NPRM, NHTSA proposed lengthening, from two months to four months, the maximum time an SRTT may be removed from storage prior to use as part of a BCWR determination. USTMA and Michelin opposed lengthening the amount of time tires may be removed from storage prior to use in UTQGS testing from two to four months. Michelin stated that environmental exposure affects tire properties and could impact the published BCWR compared to what has been done in the past. USTMA suggested it was open to further discussions on this issue and that it be severed from the proposal to be addressed in a potential separate rulemaking. Both USTMA and Michelin referenced a 2000 rulemaking where NHTSA noted that tires removed from storage degrade at the rate of approximately 10 percent per year, while tires stored outside of prescribed storage conditions degrade at a rate of no more than 5 percent per year.

This final rule contains no changes in response to these comments. While NHTSA appreciates Michelin's commitment to managing supply of the 16-inch SRTT, there are factors outside of Michelin's management of tire supply that affect when NHTSA can test a tire. After a tire is removed from storage, it must be shipped to NHTSA. NHTSA must then prepare the tires for testing and negotiate with the treadwear testing contractor the start date for the vehicle convoys that run the 16 circuits of the UTQGS treadwear course as part of the BCWR determination. Any of the steps between the shipment of tires and the initiation of the convoy may be impacted by weather conditions, scheduling conflicts, and operational limitations.

USTMA and Michelin both referenced a 2000 rulemaking in which the requirement that NHTSA use tires within two months after removal from storage was first adopted.²¹ In that rulemaking, Uniroyal cited a NHTSA study²² that found an aging effect of approximately 5 percent per year for tires in storage and about 10 percent per year for tires not in storage. NHTSA found that one year of aging could result in tire degradation of up to 5 percent, which NHTSA deemed to be acceptable as the best available compromise within the economic constraints of the supply of SRTTs, given that SRTTs had limited production runs.

Although NHTSA's storage facilities do not meet the exact storage specifications in F2493, the facilities are kept climate controlled at all times, tires are not stored near ozone-generating equipment or sources of ultraviolet radiation, and tires are stored on racks rather than stacked. NHTSA believes that its efforts reduce any potential test variability that might result from environmental exposure. NHTSA is also committed to using SRTTs as soon as reasonably practicable. NHTSA believes that these factors mitigate any additional tire degradation resulting from lengthening the amount of time a tire may be used after removal from storage from two months to four months. NHTSA believes that Michelin's commitment to a timely supply of tires and the storage conditions at NHTSA's facility will ensure that the total tire degradation will not be significantly more than the 5 percent that NHTSA deemed acceptable in the 2000 rulemaking.

USTMA and Michelin also recommended that NHTSA define the term "storage" in its regulations according to the guidelines in ASTM F2493. These specifications include constant relative humidity, temperature greater than freezing but that does not exceed 70°F (21°C), ozone levels that do not exceed 5 parts/10.⁸ The requirements further specify that tires not be stored within 30 ft (9.1 m) of electrical motors or other ozone-generating equipment, be stored in subdued light, and that tires be stacked unbundled no more than eight tires high on a pallet.

²¹ 65 FR 33,481 (May 24, 2000).

²² See Texas Test Fleet, Critical Evaluation of UTQG Treadwear Testing & Methodology, DOT HS 808-701, March 10, 1997.

Upon consideration of the comments, NHTSA has determined that it is not necessary to include a definition of the term "storage" in its regulations. NHTSA assumes, based on Michelin's comment favoring the use of a definition of "storage" from ASTM F2493, that Michelin is storing SRTTs that it manufactures in accordance with the guidelines in ASTM F2493 prior to sale. Because F2493 contains specifications for storage, NHTSA has determined that there is no need to further define the term "storage" in its regulations.

Phillip Donovan's comments also addressed the age requirements used for testing. The commenter noted that, while the restriction that an SRTT be less than one year old and be used within two (or four as proposed) months of removal from storage was workable for an agency conducting year-round testing, for entities using tires sporadically, those restrictions could result in disposal of tires prematurely leading to excess waste and expense. The commenter suggested that NHTSA could use a hardness test to determine if the tire rubber was still within the specification for testing, such as one referenced in ASTM E1136.

In response, NHTSA first observes that the existing requirement that an SRTT be less than one year old and that it be used within two months of removal of storage applies only to NHTSA's use of SRTT as CMTs as part of a test convoy in determining BCWR ratings for testing tires to verify a tire's treadwear ratings are compliant with the UTQG regulations. That requirement does not apply to PFC determinations for test surfaces used for testing compliance with braking and ESC FMVSSs. The commenter appeared to be focusing on those PFC determinations. However, even if the comment is intended to address use of the SRTT as the CMT as part of the UTQG treadwear testing, NHTSA observes that the restriction applies only to NHTSA's compliance testing. Tire manufacturers may determine their tires' treadwear ratings using any method they deem appropriate if those tires attain their ratings when tested by NHTSA on the San Angelo, Texas course using the procedures specified in 49 CFR 575.104.

As for the suggestion that NHTSA adopt a hardness specification for determining whether tires are appropriate for testing, although the commenter references E1136 for a

hardness testing, the F2493 specification for the 16-inch SRTT also contains hardness specification. NHTSA understands that those hardness specifications are part of determining whether a tire is compliant with the F2493 specification. NHTSA does not believe that the tire needs to be retested prior to use to ensure that it remains within the F2493 specification. Rather (and as discussed in more detail in response to Michelin's and USTMA's comments regarding the lengthening of time a tire may be removed from storage prior to use), NHTSA believes that the variability associated with the degradation of tires resulting from the specified maximum period of time to use a tire since the tire after its manufacture and removal from storage and the conditions in which they were stored. Accordingly, NHTSA has not made any changes to the proposal based on this comment.

C. Other Issues

Several of USTMA and Michelin's comments agreed with NHTSA's approach to issues raised in the NPRM. For example, USTMA and Michelin agreed that ASTM F1805-20 should be used for the snow tire definition and agreed with the requirement that a tire attain a traction index of equal to or greater than 112 to be considered a snow tire. USTMA and Michelin also agreed with the use of the "medium pack snow" surface condition in ASTM F1805. Michelin agreed with using all 17 quarters of available UTQGS test data. Michelin also agreed with the proposed UTQGS conversion factor of 1.324. USTMA and Michelin further agreed with referencing the total distance in terms of circuits rather than the estimated 400 miles per circuit.

USTMA and Michelin agreed that ASTM E1337-19 should be used for surface friction measurement, including its correlation equations between 14-inch and 16-inch SRTTs. Further, Michelin also agreed with the PFC values derived from the equation in ASTM E1337-19 in the NPRM.

NHTSA has considered these comments and is including these aspects of the proposal in this final rule as they were proposed.

Commenters also pointed out typographical errors in the NPRM. For example, regarding the UTQGS, USTMA and Michelin requested that NHTSA confirm that 17 quarters of data were used for comparison as referenced in Table 1 of the NPRM, rather than 14 quarters of data as stated in the preamble text. NHTSA can confirm this was an error in the preamble text and that 17 consecutive quarters of data were used in determination of the conversion factor.

Furthermore, an example calculation in the text referred only to the first 14 quarters of data. The actual conversion factor was calculated using all 17 quarters of data, as Michelin states. In addition, as noted by USTMA, NHTSA inadvertently referred to the ASTM F1805 as "F1895."

D. Effective Date

Due to the unavailability of the 14-inch SRTT, USTMA and Michelin agreed with the NPRM to make the changes to UTQGS effective at the next BCWR determination 30 days after publication of a final rule. Therefore, in light of the current unavailability of the 14-inch SRTT, NHTSA is making the UTQGS amendments effective 30 days after publication of this final rule as proposed. The effect of this is that the next BCWR determination made 30 days after publication of this final rule will use the 16-inch SRTT and will be calculated based on NHTSA's BCWR determinations using the 16-inch SRTT.

With respect to the FMVSS amendments, USTMA deferred to vehicle manufacturers on the appropriateness of lead time. Michelin recommended that NHTSA shorten the lead time to substantially less than 180 days. In contrast, the Alliance requested one year of lead time to prepare for the FMVSS amendments rather than the 180 days proposed in the August 2021 NPRM, with optional early compliance allowed. The Alliance reasoned that this would ensure that manufacturers have sufficient time to transition to the 16-inch SRTT and minimize any unnecessary waste of existing 14-inch SRTT stock. The Alliance also stated that NHTSA would not be prohibited from stockpiling 14-inch SRTTs to provide this additional lead time. The Alliance also requested that "NHTSA not require additional certification testing for carryover vehicle models that may have been certified using the 14-inch SRTT."

NHTSA has considered these comments carefully and has concluded that a shorter lead time than proposed in the NPRM is necessary for the amendments to the FMVSS. This conclusion is primarily based on the unavailability of the 14-inch SRTT for purchase, as stated by Michelin. While NHTSA has considered the issues with a shorter lead time raised by the Alliance, NHTSA does not believe any of those issues would make a shorter lead time impracticable or difficult.

As discussed in the NPRM, the intention of this amendment is not to change the severity of any FMVSS. Accordingly, the new PFC values in the FMVSSs associated with the use of the 16-inch SRTT are based on an equivalence formula in ASTM E1337-19. Because the severity of the FMVSSs is not being changed, NHTSA does not believe that any vehicle certifications would be affected by the use of the 16-inch SRTT.

Relevant to the Alliance's request that NHTSA not require additional certification testing for vehicle models that may have been certified using the 14-inch SRTT, NHTSA does not specify how manufacturers certify their vehicles as compliant, nor does NHTSA opine on whether and what testing is sufficient for certification outside of a specific enforcement action. However, as stated in both the August 2021 NPRM and in this final rule, NHTSA believes that the PFC values specified for the 14-inch SRTT currently in the FMVSSs are equivalent to those in this final rule using the 16-inch SRTT. Therefore, NHTSA does not anticipate that manufacturers would incur any burden associated with certifying vehicle models that may have been certified based on the use of the 14-inch SRTT.

Finally, as for the suggestion that NHTSA allow optional early compliance rather than a shorter lead time, optional early compliance is not suitable for this rulemaking. The 14-inch SRTT is no longer manufactured and no entity, including NHTSA or vehicle manufacturers, are able to purchase new tires to validate its test surfaces using a 14-inch SRTT. Thus, NHTSA cannot continue validating test surfaces with a 14-inch SRTT and must begin using the 16-inch SRTT. However, this final rule does not require manufacturers to use the 16-inch SRTT in their

testing and certification programs. They may continue to use the 14-inch SRTT in their own testing if they have tires available to them. However, they must ensure that the tires will meet all applicable requirements when tested by NHTSA in a compliance test program that uses the 16-inch SRTT.

Therefore, with respect to the FMVSS amendments, NHTSA finds that the present unavailability of the 14-inch SRTT requires that the 180-day lead time proposed in the NPRM be shortened. NHTSA has determined that a 30-day lead time is appropriate for changes to the FMVSS to enable the agency's use of the 16-inch SRTT. NHTSA emphasizes, however, that its data and analyses indicate that the change to the new SRTT will have no substantive effect on compliance with the present FMVSS and UTQGS requirements, so the shortened lead time is anticipated to be inconsequential.

IV. Conclusion

For the reasons discussed in the August 2021 NPRM and in this final rule, NHTSA is updating references to the SRTT from the 14-inch SRTT to the 16-inch SRTT as proposed in the August 2021 NPRM except that NHTSA is incorporating by reference the 2020 version of the 16-inch SRTT specification rather than the 2019 version referenced in the NPRM. This final rule will be effective 30 days after the date of publication in the **Federal Register**.

V. Regulatory Analyses

A. Executive Order 12866, Executive Order 13563, and DOT Rulemaking Procedures

NHTSA has considered the impact of this rulemaking action under Executive Order 12866, Executive Order 13563, and the Department of Transportation's administrative rulemaking procedures. This rulemaking is not considered significant and was not reviewed by the Office of Management and Budget under E.O. 12866, "Regulatory Planning and Review."

This final rule updates the standard reference test tire used as a baseline tire for consumer information testing, in the determination of what is a snow tire, and to evaluate testing surface friction for evaluating braking and electronic stability control performance. This final rule will not have a direct effect on safety because the changes proposed in this rule are designed to maintain the present level of stringency of NHTSA's braking and electronic stability control FMVSSs. However, if the 14-inch SRTT is discontinued without a replacement, NHTSA would be unable to verify test surface friction coefficient prior to compliance testing for braking and electronic stability control system FMVSSs. Thus, this rulemaking indirectly affects safety by ensuring that NHTSA would be able to perform compliance tests of those FMVSSs. Also, if this rule were not adopted, it would be impossible for NHTSA to continue maintaining the BCWR for treadwear testing. This unavailability of an SRTT would lead to tire manufacturers being unable to rate their tires for treadwear under the UTQGS and mold those ratings onto the side of the tire as required by 49 CFR part 575.

This rule is expected to result in additional costs to NHTSA because the 16-inch SRTT has a retail price that is \$35 per tire more than the 14-inch SRTT (\$335 vs. \$300).²³ NHTSA purchases 64 SRTTs for its own use annually in determining BCWR. Therefore, based on the cost difference of \$35 per tire, NHTSA expects that this rule could result in up to \$2,240 additional annual costs to the government. However, NHTSA has been using the 14-inch SRTT and 16-inch SRTT side-by-side since 2016 for its quarterly BCWR determination. With side-by-side testing no longer necessary, NHTSA would likely purchase fewer SRTTs than it has in the past several years.

As to potential costs to the public, based upon information provided to NHTSA by Michelin from 2017 and 2018, annual U.S. sales of 14-inch SRTTs is fewer than 2,000 units. If NHTSA assumes that U.S. sales of 16-inch SRTTs is comparable to sales of 14-inch SRTTs, the

²³ Data on the price of the SRTT was obtained from instructions on how to purchase SRTTs from Michelin. See <https://www.astm.org/COMMIT/2011%2011%2008%20E1136%20F2493%20SRTT%20Purchase%20Procedure.pdf> (last accessed April 13, 2021).

annual cost of this rule would be less than \$70,000. However, NHTSA does not know how many sales are a consequence of the SRTT being used as part of NHTSA's compliance test procedures, versus those sold for other purposes (e.g., SRTTs sold to assess the performance of tires to some other country's regulations or to voluntary industry standards). Any SRTT sales that are not related to compliance with NHTSA's regulations would not be affected by this rule and the existence of such sales would mean this rule would be less costly than the maximum estimate of \$70,000 per year. Moreover, NHTSA does not have any direct knowledge of whether regulated entities have been conducting side-by-side testing using both the 14-inch SRTT and 16-inch SRTTs like NHTSA has and whether side-by-side testing has artificially increased sales in 2017 and 2018.

B. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act (5 U.S.C. 601 et seq., as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (i.e., small businesses, small organizations, and small governmental jurisdictions). The Small Business Administration's regulations at 13 CFR part 121 define a small business, in part, as a business entity "which operates primarily within the United States." (13 CFR 121.105(a)). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule would not have a significant economic impact on a substantial number of small entities. SBREFA amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that a rule would not have a significant economic impact on a substantial number of small entities.

NHTSA has considered the effects of this rule under the Regulatory Flexibility Act. I certify that this rule will not have a significant economic impact on a substantial number of small entities. This rule will directly impact the government, as it affects the test procedures NHTSA

uses in its FMVSSs and regulations that reference tire performance. It affects manufacturers of tires and of motor vehicles only to the extent those manufacturers choose to test their products in the manner NHTSA would test them. They are not required to use the test procedures NHTSA uses.

Although some entities producing tires or vehicles that would be tested by NHTSA are considered small businesses, this rule will not have a significant economic impact on those manufacturers. First, the small manufacturers are not required to use the SRTT in certifying their products. Second, for manufacturers choosing to use the 16-inch SRTT to test their products, this rule would result in a cost increase of only \$35 per tire to entities currently purchasing the 14-inch SRTT to assess their products. NHTSA does not believe that this cost increase is significant. Finally, for the changes to the UTQGS, because NHTSA is using a conversion factor to keep the rating scale used with the 14-inch SRTT and 16-inch SRTT identical, ratings of a particular line of tires should not be affected by this rule. For FMVSS changes, NHTSA has determined an equivalent level of surface friction when evaluating PFC with the 16-inch SRTT in place of the 14-inch SRTT, so the change to the standard reference test tire should not change the performance of current tires or vehicles.

C. Executive Order 13132 (Federalism)

NHTSA has examined this rule pursuant to Executive Order 13132 (64 FR 43255, August 10, 1999) and concluded that no additional consultation with States, local governments or their representatives is mandated beyond the rulemaking process. The agency has concluded that the rulemaking would not have sufficient federalism implications to warrant consultation with State and local officials or the preparation of a federalism summary impact statement. The rule will not have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

NHTSA rules can preempt in two ways. First, the National Traffic and Motor Vehicle Safety Act contains an express preemption provision: When a motor vehicle safety standard is in effect under this chapter, a State or a political subdivision of a State may prescribe or continue in effect a standard applicable to the same aspect of performance of a motor vehicle or motor vehicle equipment only if the standard is identical to the standard prescribed under this chapter. 49 U.S.C. 30103(b)(1). It is this statutory command by Congress that preempts any non-identical State legislative and administrative law addressing the same aspect of performance.

The express preemption provision described above is subject to a savings clause under which "[c]ompliance with a motor vehicle safety standard prescribed under this chapter does not exempt a person from liability at common law." 49 U.S.C. 30103(e). Pursuant to this provision, State common law tort causes of action against motor vehicle manufacturers that might otherwise be preempted by the express preemption provision are generally preserved. However, the Supreme Court has recognized the possibility, in some instances, of implied preemption of such State common law tort causes of action by virtue of NHTSA's rules, even if not expressly preempted. This second way that NHTSA rules can preempt is dependent upon there being an actual conflict between an FMVSS and the higher standard that would effectively be imposed on motor vehicle manufacturers if someone obtained a State common law tort judgment against the manufacturer, notwithstanding the manufacturer's compliance with the NHTSA standard. Because most NHTSA standards established by an FMVSS are minimum standards, a State common law tort cause of action that seeks to impose a higher standard on motor vehicle manufacturers will generally not be preempted. However, if and when such a conflict does exist - for example, when the standard at issue is both a minimum and a maximum standard - the State common law tort cause of action is impliedly preempted. See Geier v. American Honda Motor Co., 529 U.S. 861 (2000).

Pursuant to Executive Orders 13132 and 12988, NHTSA has considered whether this rule could or should preempt State common law causes of action. The agency's ability to announce

its conclusion regarding the preemptive effect of one of its rules reduces the likelihood that preemption will be an issue in any subsequent tort litigation.

To this end, the agency has examined the nature (e.g., the language and structure of the regulatory text) and objectives of this rule and finds that the rule affects only minimum safety standards (and only insofar as how NHTSA would conduct compliance testing under those standards). As such, NHTSA does not intend that this rule preempt State tort law that would effectively impose a higher standard on motor vehicle manufacturers than that established by the affected FMVSSs. Establishment of a higher standard by means of State tort law would not conflict with the minimum standards affected by this rule. Without any conflict, there could not be any implied preemption of a State common law tort cause of action. Aspects of this rule will amend 49 CFR part 575, which is not a safety standard but an information program to assist consumers in making informed decisions when purchasing tires. The 14-inch SRTT is used as part of the determination of a tire's treadwear rating. This rule will not impose any requirements on anyone.

D. Executive Order 12988 (Civil Justice Reform)

With respect to the review of the promulgation of a new regulation, section 3(b) of Executive Order 12988, "Civil Justice Reform" (61 FR 4729; Feb. 7, 1996), requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) clearly specifies the preemptive effect; (2) clearly specifies the effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct, while promoting simplification and burden reduction; (4) clearly specifies the retroactive effect, if any; (5) specifies whether administrative proceedings are to be required before parties file suit in court; (6) adequately defines key terms; and (7) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. This document is consistent with that requirement.

Pursuant to this order, NHTSA notes as follows. The issue of preemption is discussed above. NHTSA notes further that there is no requirement that individuals submit a petition for reconsideration or pursue other administrative proceedings before they may file suit in court.

E. Protection of Children from Environmental Health and Safety Risks

Executive Order 13045, "Protection of Children from Environmental Health and Safety Risks" (62 FR 19855, April 23, 1997), applies to any rule that: (1) is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental, health, or safety risk that the agency has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the agency.

This rule is not economically significant under E.O. 12866. Further, it is part of a rulemaking that is not expected to have a disproportionate health or safety impact on children. Consequently, no further analysis is required under Executive Order 13045.

F. Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995 (PRA), a person is not required to respond to a collection of information by a Federal agency unless the collection displays a valid Office of Management and Budget (OMB) control number. There is not any information collection requirement associated with this rule.

G. Incorporation by Reference

Under regulations issued by the Office of the Federal Register (1 CFR 51.5), an agency, as part of a rule that includes material incorporated by reference, must summarize material that is incorporated by reference and must discuss the ways the material incorporated by reference is reasonably available to interested parties or how the agency worked to make materials available to interested parties.

As discussed earlier in this document, the ASTM F2493-specified tire is a standard reference test tire that is not used for general use, but, as its name suggests, is used for testing. The ASTM F2493 standard reference test tire is primarily used for evaluating surface friction (traction). The standard reference test tire specifications include, among other things, size, design, construction, and materials requirements. Although NHTSA proposed incorporating ASTM F2493-19 by reference in the proposed rule, after consideration of public comments, NHTSA has decided it is permissible and preferable not to incorporate by reference ASTM F2493, and to refer to it without regard to version number.

This rule updates an existing incorporation by reference of ASTM E1337, "Standard Test Method for Determining Longitudinal Peak Braking Coefficient (PBC) of Paved Surfaces Using Standard Reference Test Tire." ASTM E1337 is a standard test method for evaluating peak braking coefficient of a test surface using a standard reference test tire using a trailer towed by a vehicle. NHTSA uses this method to evaluate test surfaces for conducting compliance test procedures for its braking and electronic stability control standards. The 2019 version of ASTM E1337 specifies that the test may be conducted using the 16-inch SRTT and includes correlation data for converting testing using the 14-inch SRTT to the 16-inch SRTT and vice versa.

This rule also updates an existing incorporation by reference of ASTM F1805, "Standard Test Method for Single Wheel Driving Traction in a Straight Line on Snow- and Ice-Covered Surfaces." ASTM F1805 is a test method for measuring the traction of tires on snow- or ice-covered surfaces using an instrumented four-wheel drive vehicle with a single test wheel capable of measure tire performance. NHTSA uses ASTM F1805 as part of its criteria for determining whether a tire may be considered a "snow tire" under its light vehicle tire standards. The 2020 version of F1805 specifies that the test may be conducted using the 16-inch SRTT and includes correlation data for converting testing using the 14-inch SRTT to the 16-inch SRTT and vice versa.

The ASTM standards incorporated by reference in this final rule are available for review at NHTSA's headquarters in Washington, DC, and for purchase from ASTM International. The ASTM standards that are replaced by this final rule are presently available for review at NHTSA or at ASTM's online reading room.²⁴ Once this final rule becomes effective, NHTSA anticipates that ASTM will update its reading room to include these standards.

H. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) requires NHTSA to evaluate and use existing voluntary consensus standards in its regulatory activities unless doing so would be inconsistent with applicable law (e.g., the statutory provisions regarding NHTSA's vehicle safety authority) or otherwise impractical. Voluntary consensus standards are technical standards developed or adopted by voluntary consensus standards bodies. Technical standards are defined by the NTTAA as "performance-based or design-specific technical specification and related management systems practices." They pertain to "products and processes, such as size, strength, or technical performance of a product, process or material."

Examples of organizations generally regarded as voluntary consensus standards bodies include ASTM International, the Society of Automotive Engineers (SAE), and the American National Standards Institute (ANSI). If NHTSA does not use available and potentially applicable voluntary consensus standards, we are required by the Act to provide Congress, through OMB, an explanation of the reasons for not using such standards.

As discussed above, the standard reference test tire, the test method for determining surface friction, and the test method for determining whether a tire is a snow tire are based on specifications published by ASTM. Thus, this rulemaking accords with the requirements of the NTTAA.

²⁴ <https://www.astm.org/READINGLIBRARY/>.

I. Unfunded Mandates Reform Act

Section 202 of the Unfunded Mandates Reform Act of 1995 (UMRA) requires Federal agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of more than \$100 million annually (adjusted for inflation with base year of 1995). Before promulgating a NHTSA rule for which a written statement is needed, section 205 of the UMRA generally requires the agency to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows the agency to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the agency publishes with the final rule an explanation of why that alternative was not adopted.

This rule will not result in any expenditure by State, local, or tribal governments or the private sector of more than \$100 million, adjusted for inflation.

J. National Environmental Policy Act

NHTSA has analyzed this rulemaking action for the purposes of the National Environmental Policy Act. The agency has determined that implementation of this action will not have any significant impact on the quality of the human environment.

K. Regulation Identifier Number (RIN)

The Department of Transportation assigns a regulation identifier number (RIN) to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. You may use the RIN contained in the heading at the beginning of this document to find this action in the Unified Agenda.

List of Subjects

49 CFR Part 571

Imports, Incorporation by reference, Motor vehicle safety, Reporting and recordkeeping requirements, Tires.

49 CFR Part 575

Consumer protection, Incorporation by reference, Motor vehicle safety, Reporting and recordkeeping requirements, Tires.

In consideration of the foregoing, NHTSA amends 49 CFR parts 571 and 575 as follows:

PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

1. The authority citation for part 571 continues to read as follows:

Authority: 49 U.S.C. 322, 30111, 30115, 30117, and 30166; delegation of authority at 49 CFR 1.95.

2. Amend § 571.5 by:

- a. Revising paragraph (a);
- b. Removing and reserving paragraph (d)(33); and
- c. Revising paragraphs (d)(34) and (35).

The revisions read as follows:

§ 571.5 Matter incorporated by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the National Highway Traffic Safety Administration (NHTSA) must publish a document in the Federal Register and the material must be available to the public. All approved material is available for inspection at NHTSA and at the National Archives and Records Administration (NARA). Contact NHTSA at: NHTSA, 1200 New Jersey Avenue SE., Washington, DC 20590; Phone: (202) 366-2588; Website:

<https://www.nhtsa.gov/about-nhtsa/electronic-reading-room>. For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html. The material may be obtained from the sources in the following paragraphs of this section.

* * * * *

(d) * * *

(34) ASTM E1337-19, "Standard Test Method for Determining Longitudinal Peak Braking Coefficient (PBC) of Paved Surfaces Using Standard Reference Test Tire," approved December 1, 2019, into §§571.105; 571.121; 571.122; 571.126; 571.135; 571.136; 571.500.

(35) ASTM F1805-20, "Standard Test Method for Single Wheel Driving Traction in a Straight Line on Snow- and Ice-Covered Surfaces," approved May 1, 2020; into § 571.139.

* * * * *

3. Amend § 571.105 by revising paragraphs S6.9.2(a) and (b) to read as follows:

§ 571.105 Standard No. 105; Hydraulic and electric brake systems.

* * * * *

S6.9.2(a) For vehicles with a GVWR greater than 10,000 pounds, road tests (excluding stability and control during braking tests) are conducted on a 12-foot-wide, level roadway, having a peak friction coefficient of 1.02 when measured using an ASTM F2493 standard reference test tire, in accordance with ASTM E1337-19 (incorporated by reference, see §571.5), at a speed of 40 mph, without water delivery. Burnish stops are conducted on any surface. The parking brake test surface is clean, dry, smooth, Portland cement concrete.

(b) For vehicles with a GVWR greater than 10,000 pounds, stability and control during braking tests are conducted on a 500-foot-radius curved roadway with a wet level surface having a peak friction coefficient of 0.55 when measured on a straight or curved section of the curved roadway using an ASTM F2493 standard reference tire, in accordance with ASTM E1337-19 at a speed of 40 mph, with water delivery.

* * * * *

4. Amend § 571.121 by revising paragraphs S5.3.1.1 introductory text, S5.3.6.1, S5.7.1, S6.1.7, Table I, Table II, and Table IIa to read as follows:

§ 571.121 Standard No. 121; Air brake systems.

* * * * *

S5.3.1.1 Stop the vehicle from 60 mph on a surface with a peak friction coefficient of 1.02 with the vehicle loaded as follows:

* * * * *

S5.3.6.1 Using a full-treadle brake application for the duration of the stop, stop the vehicle from 30 mph or 75 percent of the maximum drive-through speed, whichever is less, on a 500-foot radius curved roadway with a wet level surface having a peak friction coefficient of 0.55 when measured on a straight or curved section of the curved roadway using an ASTM F2493 standard reference tire, in accordance with ASTM E1337-19 (incorporated by reference, see §571.5), at a speed of 40 mph, with water delivery.

* * * * *

S5.7.1 *Emergency brake system performance.* When stopped six times for each combination of weight and speed specified in S5.3.1.1, except for a loaded truck tractor with an unbraked control trailer, on a road surface having a PFC of 1.02, with a single failure in the service brake system of a part designed to contain compressed air or brake fluid (except failure of a common valve, manifold, brake fluid housing, or brake chamber housing), the vehicle shall stop at least once in not more than the distance specified in Column 5 of Table II, measured from the point at which movement of the service brake control begins, except that a truck-tractor tested at its unloaded vehicle weight plus up to 1500 pounds shall stop at least once in not more than the distance specified in Column 6 of Table II. The stop shall be made without any part of the vehicle leaving the roadway, and with unlimited wheel lockup permitted at any speed.

* * * * *

S6.1.7 Unless otherwise specified, stopping tests are conducted on a 12-foot wide level, straight roadway having a peak friction coefficient of 1.02. For road tests in S5.3, the vehicle is aligned in the center of the roadway at the beginning of a stop. Peak friction coefficient is measured using an ASTM F2493 standard reference test tire in accordance with ASTM E1337-19 (incorporated by reference, see §571.5), at a speed of 40 mph, without water delivery for the surface with PFC of 1.02, and with water delivery for the surface with PFC of 0.55.

* * * * *

Table I – Stopping Sequence

	Truck tractors	Single unit trucks and buses
Burnish (S6.1.8)	1	1
Stability and Control at GVWR (S5.3.6)	2	N/A
Stability and Control at LLVW (S5.3.6)	3	5
Manual Adjustment of Brakes	4	N/A
60 mph Service Brake Stops at GVWR (S5.3.1)	5	2
60 mph Emergency Service Brake Stops at GVWR (S5.7.1)	N/A	3
Parking Brake Test at GVWR (S5.6)	6	4
Manual Adjustment of Brakes	7	6
60 mph Service Brake Stops at LLVW (S5.3.1)	8	7
60 mph Emergency Service Brake Stops at LLVW (S5.7.1)	9	8
Parking Brake Test at LLVW (S5.6)	10	9
Final Inspection	11	10

Table II – Stopping Distance in Feet

Vehicle speed in miles per hour	Service Brake						Emergency Brake	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
30	70	78	65	78	84	61	170	186
35	96	106	89	106	114	84	225	250
40	125	138	114	138	149	108	288	325
45	158	175	144	175	189	136	358	409
50	195	216	176	216	233	166	435	504
55	236	261	212	261	281	199	520	608
60	280	310	250	310	335	235	613	720

Note:

(1) Loaded and Unloaded Buses.

(2) Loaded Single-Unit Trucks.

(3) Loaded Tractors with Two Axles; or with Three Axles and a GVWR of 70,000 lbs. or less; or with Four or More Axles and a GVWR of 85,000 lbs. or less. Tested with an Unbraked Control Trailer.

(4) Loaded Tractors with Three Axles and a GVWR greater than 70,000 lbs.; or with Four or More Axles and a GVWR greater than 85,000 lbs. Tested with an Unbraked Control Trailer.

(5) Unloaded Single-Unit Trucks.

(6) Unloaded Tractors (Bobtail).

(7) All Vehicles except Tractors, Loaded and Unloaded.

(8) Unloaded Tractors (Bobtail).

Table IIa – Stopping Distance in Feet: Optional Requirements for: (1) Three-Axle Tractors With a Front Axle That Has a GAWR of 14,600 Pounds or Less, and With Two Rear Drive Axles That Have a Combined GAWR of 45,000 Pounds or Less, Manufactured Before August 1, 2011; and (2) All Other Tractors Manufactured Before August 1, 2013

Vehicle speed in miles per hour	Service Brake				Emergency Brake	
	(1)	(2)	(3)	(4)	(5)	(6)
30	70	78	84	89	170	186
35	96	106	114	121	225	250
40	125	138	149	158	288	325
45	158	175	189	200	358	409
50	195	216	233	247	435	504
55	236	261	281	299	520	608
60	280	310	335	355	613	720

Note: (1) Loaded and unloaded buses; (2) Loaded single unit trucks; (3) Unloaded truck tractors and single unit trucks; (4) Loaded truck tractors tested with an unbraked control trailer; (5) All vehicles except truck tractors; (6) Unloaded truck tractors.

* * * * *

5. Amend § 571.122 by revising paragraphs S6.1.1.1, S6.1.1.2, S6.1.1.3, and S6.9.7.1(a)

to read as follows:

§ 571.122 Standard No. 122; Motorcycle brake systems.

* * * * *

S6.1.1.1 *High friction surface.* A high friction surface is used for all dynamic brake tests excluding the ABS tests where a low-friction surface is specified. The high-friction surface test area is a clean, dry and level surface, with a gradient of ≤ 1 percent. The high-friction surface has a peak braking coefficient (PBC) of 1.02.

S6.1.1.2 *Low-friction surface.* A low-friction surface is used for ABS tests where a low-friction surface is specified. The low-friction surface test area is a clean and level surface, which may be wet or dry, with a gradient of ≤ 1 percent. The low-friction surface has a PBC of ≤ 0.50 .

S6.1.1.3 *Measurement of PBC.* The PBC is measured using the ASTM F2493 standard reference test tire, in accordance with ASTM E1337-19, at a speed of 64 km/h (incorporated by reference; see §571.5).

* * * * *

S6.9.7.1 * * *

(a) *Test surfaces.* A low friction surface immediately followed by a high friction surface with a PBC ≥ 0.90 .

* * * * *

6. Amend § 571.126 by revising paragraph S6.2.2 to read as follows:

§ 571.126 Standard No. 126; Electronic stability control systems for light vehicles.

* * * * *

S6.2.2 The road test surface must produce a peak friction coefficient (PFC) of 1.02 when measured using an ASTM F2493 standard reference test tire, in accordance with ASTM E1337-19 (incorporated by reference, see §571.5) at a speed of 64.4 km/h (40 mph), without water delivery.

* * * * *

7. Amend § 571.135 by revising paragraphs S6.2.1, S7.4.3(f), S7.5.2(f), S7.6.2(f), S7.7.3(f), S7.8.2(f), S7.9.2(f), S7.10.3(e), and S7.11.3(f) to read as follows:

§ 571.135 Standard No. 135; Light vehicle brake systems.

* * * * *

S6.2.1. *Pavement friction.* Unless otherwise specified, the road test surface produces a peak friction coefficient (PFC) of 1.02 when measured using an ASTM F2493 standard reference

test tire, in accordance with ASTM E1337-19 (incorporated by reference, see §571.5), at a speed of 64.4 km/h (40 mph), without water delivery.

* * * * *

S7.4.3. * * *

(f) Test surface: PFC of at least 1.02.

* * * * *

S7.5.2. * * *

(f) Test surface: PFC of 1.02.

* * * * *

S7.6.2. * * *

(f) Test surface: PFC of 1.02.

* * * * *

S7.7.3. * * *

(f) Test surface: PFC of 1.02.

* * * * *

S7.8.2. * * *

(f) Test surface: PFC of 1.02.

* * * * *

S7.9.2. * * *

(f) Test surface: PFC of 1.02.

* * * * *

S7.10.3. * * *

(e) Test surface: PFC of 1.02.

* * * * *

S7.11.3. * * *

(f) Test surface: PFC of 1.02.

* * * * *

8. Amend § 571.136 by revising paragraph S6.2.2 to read as follows:

§ 571.136 Standard No. 136; Electronic stability control systems for heavy vehicles.

* * * * *

S6.2.2 The road test surface produces a peak friction coefficient (PFC) of 1.02 when measured using an ASTM F2493 standard reference test tire, in accordance with ASTM E1337-19, at a speed of 64.4 km/h (40 mph), without water delivery (incorporated by reference, see §571.5).

* * * * *

9. Amend § 571.139 by revising the definition for "Snow tire" in S3 to read as follows:

§ 571.139 Standard No. 139; New pneumatic radial tires for light vehicles.

* * * * *

S3 * * *

Snow tire means a tire that attains a traction index equal to or greater than 112, compared to the ASTM F2493 standard reference test tire when using the snow traction test on the medium pack snow surface as described in ASTM F1805-20 (incorporated by reference, see §571.5), and that is marked with an Alpine Symbol specified in S5.5(i) on at least one sidewall.

* * * * *

10. Amend § 571.500 by revising paragraph S6.2.1 to read as follows:

§ 571.500 Standard No. 500; Low-speed vehicles.

* * * * *

S6.2.1. *Pavement friction.* Unless otherwise specified, the road test surface produces a peak friction coefficient (PFC) of 1.02 when measured using a ASTM F2493 standard reference test tire, in accordance with ASTM E1337-19, at a speed of 64.4 km/h (40.0 mph), without water delivery (incorporated by reference; see §571.5).

* * * * *

PART 575—CONSUMER INFORMATION

11. The authority citation for part 575 continues to read as follows:

Authority: 49 U.S.C. 32302, 32304A, 30111, 30115, 30117, 30123, 30166, 30181, 30182, 30183, and 32908, Pub. L. 104-414, 114 Stat. 1800, Pub. L. 109-59, 119 Stat. 1144, Pub. L. 110-140, 121 Stat. 1492, 15 U.S.C. 1232(g); delegation of authority at 49 CFR 1.95

§ 575.3 [Amended]

12. Amend § 575.3 by removing and reserving paragraph (c)(2).

13. Amend § 575.104 by revising paragraphs (e)(2)(viii), and (e)(2)(ix)(A)(2), the note to paragraph (e)(2)(ix)(C), and paragraph (e)(2)(ix)(F) to read as follows:

§ 575.104 Uniform tire quality grading standards.

* * * * *

(e) * * *

(2) * * *

(viii) Drive the convoy on the test roadway for 16 circuits (approximately 6,400 miles).

(A) After every circuit (approximately 400 miles), rotate each vehicle's tires by moving each front tire to the same side of the rear axle and each rear tire to the opposite side of the front axle. Visually inspect each tire for treadwear anomalies.

(B) After every second circuit (approximately 800 miles), rotate the vehicles in the convoy by moving the last vehicle to the lead position. Do not rotate driver positions within the convoy. In four-car convoys, vehicle one shall become vehicle two, vehicle two shall become vehicle three, vehicle three shall become vehicle four, and vehicle four shall become vehicle one.

(C) After every second circuit (approximately 800 miles), if necessary, adjust wheel alignment to the midpoint of the vehicle manufacturer's specification, unless adjustment to the midpoint is not recommended by the manufacturer; in that case, adjust the alignment to the manufacturer's recommended setting. In all cases, the setting is within the tolerance specified by the manufacturer of the alignment machine.

(D) After every second circuit (approximately 800 miles), if determining the projected mileage by the 9-point method set forth in paragraph (e)(2)(ix)(A)(I) of this section, measure the average tread depth of each tire following the procedure set forth in paragraph (e)(2)(vi) of this section.

(E) After every fourth circuit (approximately 1,600 miles), move the complete set of four tires to the following vehicle. Move the tires on the last vehicle to the lead vehicle. In moving the tires, rotate them as set forth in paragraph (e)(2)(viii)(A) of this section.

(F) At the end of the test, measure the tread depth of each tire pursuant to the procedure set forth in paragraph (e)(2)(vi) of this section.

(ix) * * *

(A) * * *

(2) *Two-point arithmetical method.* (i) For each course monitoring and candidate tire in the convoy, using the average tread depth measurements obtained in accordance with paragraphs (e)(2)(vi) and (e)(2)(viii)(F) of this section and the corresponding mileages as data points, determine the slope (m) of the tire's wear in mils of tread depth per 1,000 miles by the following formula:

$$m = 1000 \frac{(Y1 - Y0)}{(X1 - X0)}$$

Where:

Y₀ = average tread depth after break-in, mils.

Y₁ = average tread depth after 16 circuits (approximately 6,400 miles), mils.

X₀ = 0 miles (after break-in).

X₁ = Total mileage of travel after 16 circuits (approximately 6,400 miles).

(ii) This slope (m) will be negative in value. The tire's wear rate is defined as the slope (m) expressed in mils per 1,000 miles.

* * * * *

(C) * * *

Note 1 to paragraph (e)(2)(ix)(C): The ASTM F2493 standard reference test tire is the course monitoring tire (CMT). The base wear rate for the CMTs will be obtained by the Government by

running the course monitoring tires for 16 circuits over the San Angelo, Texas, UTQGS test route 4 times per year, then using the average wear rate from the last 4 quarterly CMT tests for the base course wear rate calculation. Each new base course wear rate will be published in Docket No. NHTSA-2001-9395. The course monitoring tires used in a test convoy must be no more than one-year-old at the commencement of the test and must be used within four months after removal from storage.

* * * * *

(F) Compute the grade (P) of the of the NHTSA nominal treadwear value for each candidate tire by using the following formula:

$$P = \frac{\textit{Projected mileage} \times \textit{base course wear rate}_n}{304}$$

Where base course wear rate_n = new base course wear rate, i.e., average treadwear of the last 4 quarterly course monitoring tire tests conducted by NHTSA.

Round off the percentage to the nearest lower 20-point increment.

* * * * *

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Steven S. Cliff,
Administrator.
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